

ABSTRACT OF THE DISCLOSURE

An electron beam exposure apparatus which exposes a substrate with a predetermined pattern using one or plurality of electron beams is provided with a θ Z stage on which the substrate is mounted; an X-Y transfer stage which drives the θ Z stage on an X-Y plane; and an electromagnetic actuator (a θ linear motor movable element and θ linear motor stator) which drives the θ Z stage in a rotation direction about the Z-axis with respect to the X-Y transfer stage.